

## Close to the Edge? How many firms around the world are in or close to corporate distress? And how do our results differ from others?

As interest rates rose in many economies, fears of a “hard landing” grew. But has tighter monetary policy translated into more firms going into corporate distress? The Crux of Capitalism project tracks three indicators of corporate performance and is well placed to assess how many firms are close to the edge. In 2021 and 2022 already 25% of firms struggled to make their interest payments, 8% showed elevated risk of bankruptcy, and 28% were destroying economic value. Australian and Canadian firms appear to be especially vulnerable, while fewer Japanese and Swiss counterparts are in danger.

‘The corporate bankruptcy wave will get even uglier’ (2023), ‘Why the Fed is to blame for the boom in zombie companies’ (2022), and ‘Bank of England warns on corporate default risk’ (2023). These are just a few headlines that express growing concerns about corporate distress as central banks reverse one and a half decades of cheap money. But how many firms in distress are there really around the world? How did the share of such firms develop during the past 18 years? And how does corporate health compare across countries?

Existing studies are often not suited to answer these questions because they focus on only one narrow definition of corporate distress, they do not track firm performance over time, or they focus on only one economy and therefore lack comparability.

Our approach aims at overcoming these shortcomings: The Crux of Capitalism database provides three measures of corporate performance for about 40,000 firms in 21 sizeable economies since 2005 that are updated regularly. First, we calculate the [interest coverage ratio](#) (ICR), i.e. the ratio of operating income before depreciation to total interest and related expenses, which is a common ‘zombie’ indicator. Second, we compute the [Altman Z”-score](#), a well-established indicator for the likelihood of bankruptcy. Third, we estimate each firm’s economic profits to see if it was unable to cover the opportunity cost of the capital it deploys. Four findings on the state of global corporate distress follow.

First, the share of firms worldwide in or close to corporate distress in 2022 surprised us. As one can see in graph 1, about 33% of firms around the world had an ICR below one, which is taken by many to indicate zombie firm status. Meanwhile, almost 11% had negative Z”-scores, which signals a heightened likelihood of bankruptcy. And 44% of firms generated economic losses; 3.5% destroyed more than \$100m.

If we only look at those firms that underperformed on these criteria in both 2021 and 2022, naturally these percentages naturally drop. As shown in graph 2, the shares of firms with insufficient means to pay their interest expenses, companies with negative Z”-scores, and value-destroying firms fall to 25%, 8%, and 28%, respectively. The fact that these percentages are lower than those in the last paragraph reveals the sizable dynamics in and out of corporate distress and that it is worth following the health of individual firms on an ongoing basis.

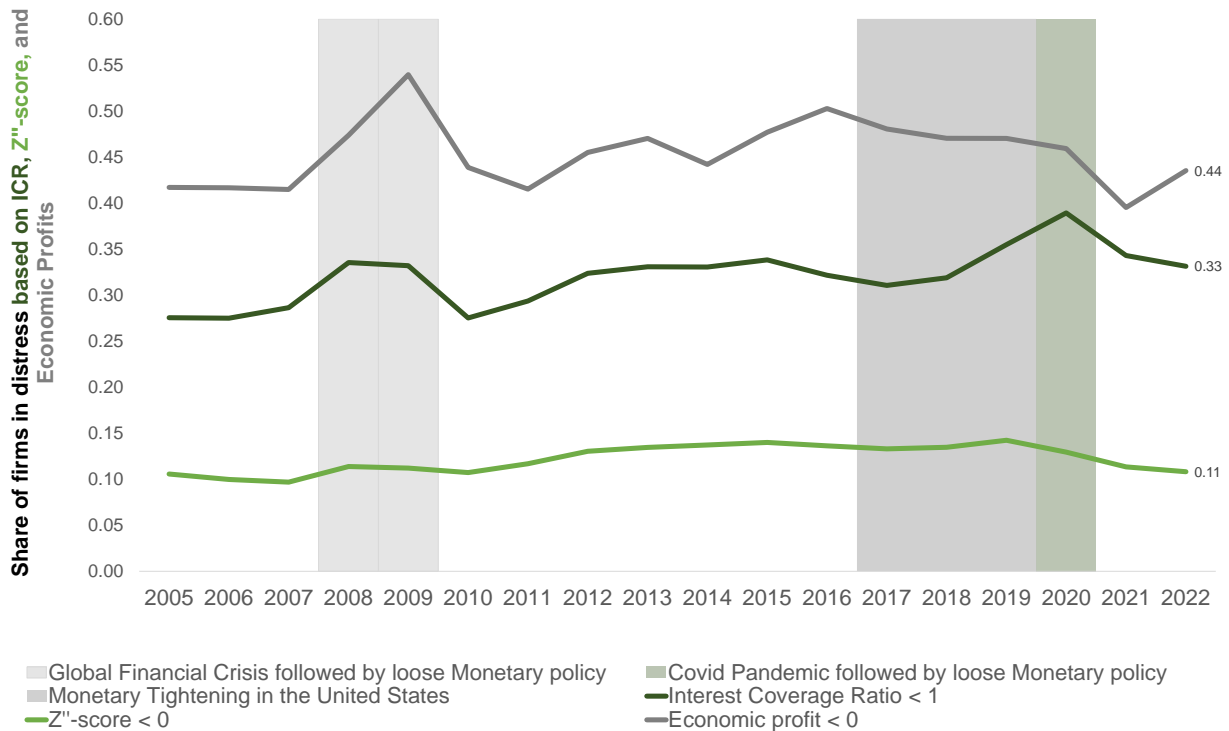
Second, on the ICR metric the shares of firms in or near to corporate distress fluctuates considerably over time on the ICR metric. As shown by the ICR lines in figures 1 and 2, the share of zombie firms jumped during the Global Financial Crisis and in the first year of the Covid pandemic. Subsequently, loose monetary policy appears to have lowered the share of zombies—a similar response can be found for the Z”-score and in our economic profits measure. Looking back, however, note (a) the share of firms with elevated bankruptcy risk remained stable during the entire 2012-2020 period and (b) the share of companies that destroy value actually fell during the US Federal Reserve Board’s 2015-2019 hiking cycle and the Covid crisis.

Third, these metrics vary significantly across our 21 economies. For 2021-2022, for example, the share of firms, which were in distress according to our ICR criterion varied between 8% in Japan and 56% in Canada. Japanese corporates were, in fact, the ‘healthiest’ on all three metrics presented here. Australian and Canadian firms, on the other hand, showed high likelihood of corporate distress on all three measures. Dutch companies, in turn, featured among the least healthy according the ICR criterion, but among the most solid ones when looking at Z”-scores and economic profits instead. The Dutch example demonstrates that the ICR (zombification), the Z”-score (bankruptcy risk), and economic profits (value creation) contain different pieces of information about corporate distress.

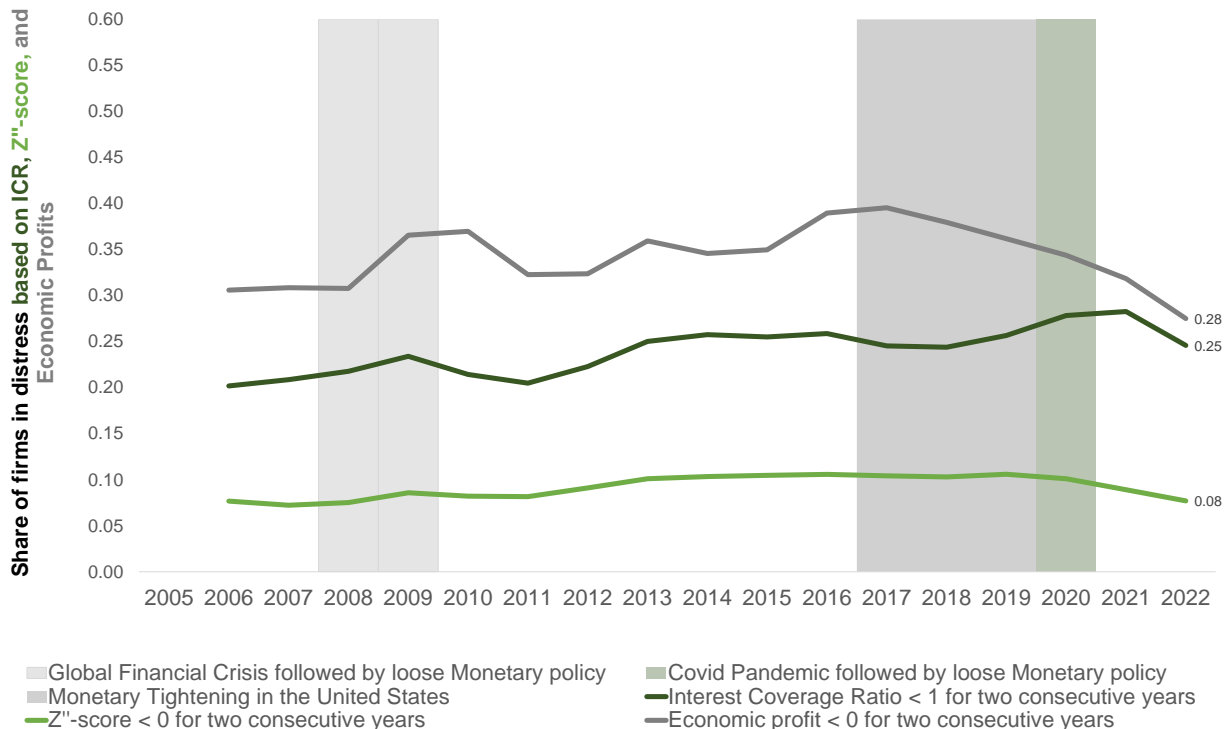
Fourth, our findings are very much in line with others. [Altman et. al. \(2021\)](#), for instance, find the 2021 shares of firms with a three-year moving average for the ICR below one and for the Z”-score below zero to be about 21% and 9%, respectively (in the world’s 20 largest economies). They also document the highest signs of distress in recent years for Australian and Canadian firms and the lowest for Japanese. [Banerjee and Hofmann \(2022\)](#), who use the same two-year ICR condition as we do but also require Tobin’s q to be below the sector-median, find a 15% zombie share for 2017 (for 14 economies).

As they normalize fiscal and monetary conditions, policymakers are walking a tightrope between terminating firms on life support and reviving viable ones. Saving firms with unfavourable ICRs but favourable other indicators is an approach worth considering. With our regularly updated data, analysts and officials are better placed to assess corporate distress at the firm, sectoral, and national levels.

**Figure 1: Share of firms in financial distress between 2005 and 2022 in 21 economies—worldwide economic profit and ICR measures fluctuate more than a leading bankruptcy scoring metric**

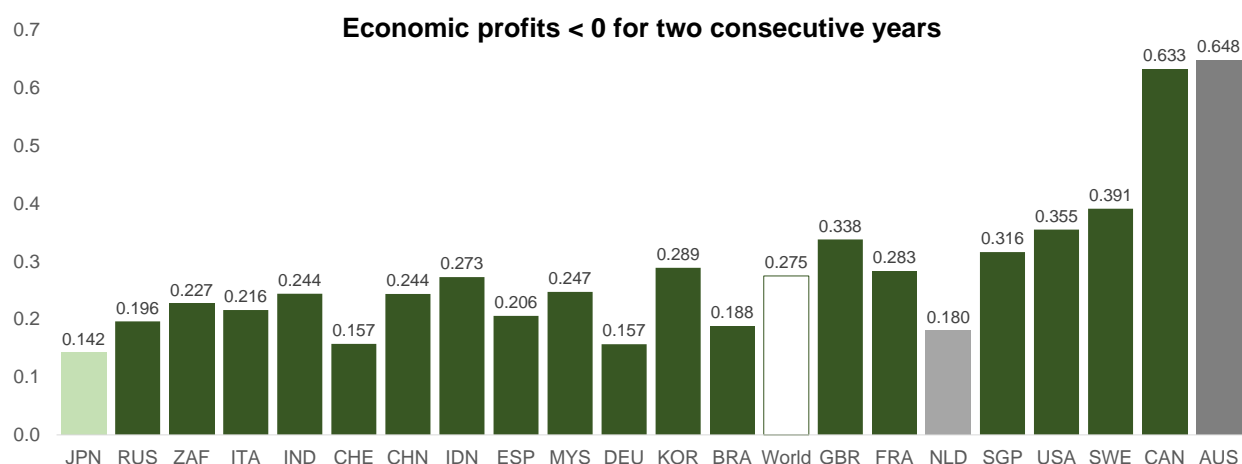
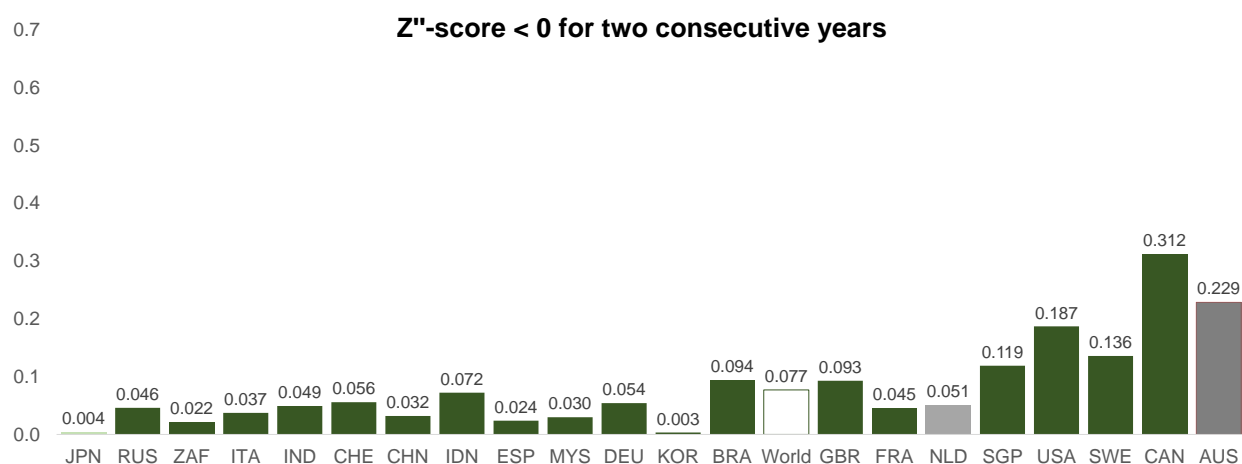
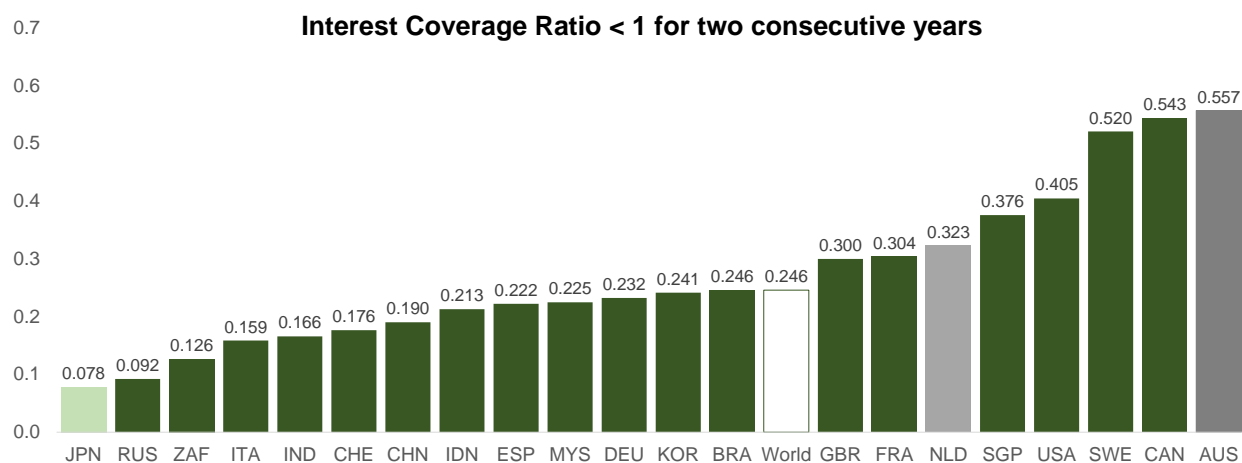


**Figure 2: Sizeable share of firms in 21 economies have been in or near financial distress for two consecutive years between 2005 and 2022**



*Note: Share of firms with Z''-score < 0, ICR < 1, EP < 0 in two consecutive years. If no data is available for a given year, the condition of two consecutive years is not met (a conservative approach). Year 2005 (earliest available data) is omitted, as there is (almost) no data for the previous year 2004 available.*

**Figure 3: The shares of firms in financial distress during both 2021 and 2022 varies considerably across the 21 economies tracked in the Crux of Capitalism project**



*Note: Share of firms with ICR < 1, Z"-score < 0, EP < 0 in the two consecutive years 2021 and 2022. If no data is available for a given year, the condition of two consecutive years is not met (a conservative approach).*